

APPENDIX A

Genbank Accession # M21616

Sequence of human PDGF receptor ceta

TGTTCCTCCTGAGCCTTCAGGAGCCTGCACCAGTCCTGCCTGTCCTTCTACTC 52
 AGCTGTTACCCACTCTGGGACCAGCAGTCTTTCTGATAACTGGGAGAGGGCAGTAAGGAGGACTTCC 119
 TGGAGGGGGGTGACTGTCCAGAGCCTGGAACCTGTGCCACACCAGAAGCCATCAGCAGCAAGGACACC 186
 ATG CGG CTT CCG GGT GCG ATG CCA GCT CTG GCC CTC AAA GGC GAG CTG CTG 237
 Met Arg Leu Pro Gly Ala Met Pro Ala Leu Ala Leu Lys Gly Glu Leu Leu -15
 TTG CTG TCT CTC CTG TTA CTT CTG GAA CCA CAG ATC TCT CAG GGC CTG GTC 288
 Leu Leu Ser Leu Leu Leu Leu Leu Glu Pro Gln Ile Ser Gln Gly Leu Val 2
 GTC ACA CCC CCG GGG CCA GAG CTT GTC CTC AAT GTC TCC AGC ACC TTC GTT 339
 Val Thr Pro Pro Gly Pro Glu Leu Val Leu Asn Val Ser Ser Thr Phe Val 19
 CTG ACC TGC TCG GGT TCA GCT CCG GTG GTG TGG GAA CGG ATG TCC CAG GAG 390
 Leu Thr Cys Ser Gly Ser Ala Pro Val Val Trp Glu Arg Met Ser Gln Glu 36
 CCC CCA CAG GAA ATG GCC AAG GCC CAG GAT GGC ACC TTC TCC AGC GTG CTC 441
 Pro Pro Gln Glu Met Ala Lys Ala Gln Asp Gly Thr Phe Ser Ser Val Leu 53
 ACA CTG ACC AAC CTC ACT GGG CTA GAC ACG GGA GAA TAC TTT TGC ACC CAC 492
 Thr Leu Thr Asn Leu Thr Gly Leu Asp Thr Gly Glu Tyr Phe Cys Thr His 70
 AAT GAC TCC CGT GGA CTG GAG ACC GAT GAG CGG AAA CGG CTC TAC ATC TTT 543
 Asn Asp Ser Arg Gly Leu Glu Thr Asp Glu Arg Lys Arg Leu Tyr Ile Phe 87
 GTG CCA GAT CCC ACC GTG GGC TTC CTC CCT AAT GAT GCC GAG GAA CTA TTC 594
 Val Pro Asp Pro Thr Val Gly Phe Leu Pro Asn Asp Ala Glu Glu Leu Phe 104
 ATC TTT CTC ACG GAA ATA ACT GAG ATC ACC ATT CCA TGC CGA GTA ACA GAC 645
 Ile Phe Leu Thr Glu Ile Thr Glu Ile Thr Ile Pro Cys Arg Val Thr Asp 121
 CCA CAG CTG GTG GTG ACA CTG CAC GAG AAG AAA GGG GAC GTT GCA CTG CCT 696
 Pro Gln Leu Val Val Thr Leu His Glu Lys Lys Gly Asp Val Ala Leu Pro 138
 GTC CCC TAT GAT CAC CAA CGT GGC TTT TCT GGT ATC TTT GAG GAC AGA AGC 747
 Val Pro Tyr Asp His Gln Arg Gly Phe Ser Gly Ile Phe Glu Asp Arg Ser 155
 TAC ATC TGC AAA ACC ACC ATT GGG GAC AGG GAG GTG GAT TCT GAT GCC TAC 798
 Tyr Ile Cys Lys Thr Thr Ile Gly Asp Arg Glu Val Asp Ser Asp Ala Tyr 172
 TAT GTC TAC AGA CTC CAG GTG TCA TCC ATC AAC GTC TCT GTG AAC GCA GTG 849
 Tyr Val Tyr Arg Leu Gln Val Ser Ser Ile Asn Val Ser Val Asn Ala Val 189
 CAG ACT GTG GTC CGC CAG GGT GAG AAC ATC ACC CTC ATG TGC ATT GTG ATC 900
 Gln Thr Val Val Arg Gln Gly Glu Asn Ile Thr Leu Met Cys Ile Val Ile 206
 GGG AAT GAT GTG GTC AAC TTC GAG TGG ACA TAC CCC CGC AAA GAA AGT GGG 951
 Gly Asn Asp Val Val Asn Phe Glu Trp Thr Tyr Pro Arg Lys Glu Ser Gly 223
 CGG CTG GTG GAG CCG GTG ACT GAC TTC CTC TTG GAT ATG CCT TAC CAC ATC 1002
 Arg Leu Val Glu Pro Val Thr Asp Phe Leu Leu Asp Met Pro Tyr His Ile 240
 CGC TCC ATC CTG CAC ATC CCC AGT GCC GAG TTA GAA GAC TCG GGG ACC TAC 1053

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 106727-004200

1061221 00422001

Arg	Ser	Ile	Leu	His	Ile	Pro	Ser	Ala	Glu	Leu	Glu	Asp	Ser	Gly	Thr	Tyr	257
ACC	TGC	AAT	GTG	ACG	GAG	AGT	GTG	AAT	GAC	CAT	CAG	GAT	GAA	AAG	CCC	ATC	1104
Thr	Cys	Asn	Val	Thr	Glu	Ser	Val	Asn	Asp	His	Gln	Asp	Glu	Lys	Ala	Ile	274
AAC	ATC	ACC	GTG	GTT	GAG	AGC	GGC	TAC	GTG	CGG	CTC	CTG	GGA	GAG	GTG	GGC	1155
Asn	Ile	Thr	Val	Val	Glu	Ser	Gly	Tyr	Val	Arg	Leu	Leu	Gly	Glu	Val	Gly	291
ACA	CTA	CAA	TTT	GCT	GAG	CTG	CAT	CGG	AGC	CGG	ACA	CTG	CAG	GTA	GTG	TTC	1206
Thr	Leu	Gln	Phe	Ala	Glu	Leu	His	Arg	Ser	Arg	Thr	Leu	Gln	Val	Val	Phe	308
GAG	GCC	TAC	CCA	CCG	CCC	ACT	GTC	CTG	TGG	TTC	AAA	GAC	AAC	CGC	ACC	CTG	1257
Glu	Ala	Tyr	Pro	Pro	Pro	Thr	Val	Leu	Trp	Phe	Lys	Asp	Asn	Arg	Thr	Leu	325
GGC	GAC	TCC	AGC	GCT	GGC	GAA	ATC	GCC	CTG	TCC	ACG	CGC	AAC	GTG	TCG	GAG	1308
Gly	Asp	Ser	Ser	Ala	Gly	Glu	Ile	Ala	Leu	Ser	Thr	Arg	Asn	Val	Ser	Glu	342
ACC	CGG	TAT	GTG	TCA	GAG	CTG	ACA	CTG	GTT	CGC	GTG	AAG	GTG	GCA	GAG	GCT	1359
Thr	Arg	Tyr	Val	Ser	Glu	Leu	Thr	Leu	Val	Arg	Val	Lys	Val	Ala	Glu	Ala	359
GGC	CAC	TAC	ACC	ATG	CGG	GGC	TTC	CAT	GAG	GAT	GCT	GAG	GTC	CAG	CTC	TCC	1410
Gly	His	Tyr	Thr	Met	Arg	Ala	Phe	His	Glu	Asp	Ala	Glu	Val	Gln	Leu	Ser	376
TTC	CAG	CTA	CAG	ATC	AAT	GTC	CCT	GTC	CGA	GTG	CTG	GAG	CTA	AGT	GAG	AGC	1461
Phe	Gln	Leu	Gln	Ile	Asn	Val	Pro	Val	Arg	Val	Leu	Glu	Leu	Ser	Glu	Ser	393
CAC	CCT	GAC	AGT	GGG	GAA	CAG	ACA	GTC	CGC	TGT	CGT	GGC	CGG	GGC	ATG	CCG	1512
His	Pro	Asp	Ser	Gly	Glu	Gln	Thr	Val	Arg	Cys	Arg	Gly	Arg	Gly	Met	Pro	410
CAG	CCG	AAC	ATC	ATC	TGG	TCT	GCC	TGC	AGA	GAC	CTC	AAA	AGG	TGT	CCA	CGT	1563
Gln	Pro	Asn	Ile	Ile	Trp	Ser	Ala	Cys	Arg	Asp	Leu	Lys	Arg	Cys	Pro	Arg	427
GAG	CTG	CCG	CCC	ACG	CTG	CTG	GGG	AAC	AGT	TCC	GAA	GAG	GAG	AGC	CAG	CTG	1614
Glu	Leu	Pro	Pro	Thr	Leu	Leu	Gly	Asn	Ser	Ser	Glu	Glu	Glu	Ser	Gln	Leu	444
GAG	ACT	AAC	GTG	ACG	TAC	TGG	GAG	GAG	GAG	CAG	GAG	TTT	GAG	GTG	GTG	AGC	1665
Glu	Thr	Asn	Val	Thr	Tyr	Trp	Glu	Glu	Glu	Gln	Glu	Phe	Glu	Val	Val	Ser	461
ACA	CTG	CGT	CTG	CAG	CAC	GTG	GAT	CGG	CCA	CTG	TCG	GTG	CGC	TGC	ACG	CTG	1716
Thr	Leu	Arg	Leu	Gln	His	Val	Asp	Arg	Pro	Leu	Ser	Val	Arg	Cys	Thr	Leu	478
CGC	AAC	GCT	GTG	GGC	CAG	GAC	ACG	CAG	GAG	GTC	ATC	GTG	GTG	CCA	CAC	TCC	1767
Arg	Asn	Ala	Val	Gly	Gln	Asp	Thr	Gln	Glu	Val	Ile	Val	Val	Pro	His	Ser	495
TTG	CCC	TTT	AAG	GTG	GTG	GTG	ATC	TCA	GCC	ATC	CTG	GCC	CTG	GTG	GTG	CTC	1818
Leu	Pro	Phe	Lys	Val	Val	Val	Ile	Ser	Ala	Ile	Leu	Ala	Leu	Val	Val	Leu	512
ACC	ATC	ATC	TCC	CTT	ATC	ATC	CTC	ATC	ATG	CTT	TGG	CAG	AAG	AAG	CCA	CGT	1869
Thr	Ile	Ile	Ser	Leu	Ile	Ile	Leu	Ile	Met	Leu	Trp	Gln	Lys	Lys	Pro	Arg	529
TAC	GAG	ATC	CGA	TGG	AAG	GTG	ATT	GAG	TCT	GTG	AGC	TCT	GAC	GGC	CAT	GAG	1920
Tyr	Glu	Ile	Arg	Trp	Lys	Val	Ile	Glu	Ser	Val	Ser	Ser	Asp	Gly	His	Glu	546
TAC	ATC	TAC	GTG	GAC	CCC	ATG	CAG	CTG	CCC	TAT	GAC	TCC	ACG	TGG	GAG	CTG	1971
Tyr	Ile	Tyr	Val	Asp	Pro	Met	Gln	Leu	Pro	Tyr	Asp	Ser	Thr	Trp	Glu	Leu	563
CCG	CGG	GAC	CAG	CTT	GTG	CTG	GGA	CGC	ACC	CTC	GGC	TCT	GGG	GCC	TTT	GGG	2022
Pro	Arg	Asp	Gln	Leu	Val	Leu	Gly	Arg	Thr	Leu	Gly	Ser	Gly	Ala	Phe	Gly	580

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CAG GTG GTG GAG GCC ACA GCT CAT GGT CTG AGC CAT TCT CAG GCC ACG ATG 2073
 Gln Val Val Glu Ala Thr Ala His Gly Leu Ser His Ser Gln Ala Thr Met 597

 AAA GTG GCC GTC AAG ATG CTT AAA TCC ACA GCC CGC AGC AGT GAG AAG CAA 2124
 Lys Val Ala Val Lys Met Leu Lys Ser Thr Ala Arg Ser Ser Glu Lys Gln 614

 GCC CTT ATG TCG GAG CTG AAG ATC ATG AGT CAC CTT GGG CCC CAC CTG AAC 2175
 Ala Leu Met Ser Glu Leu Lys Ile Met Ser His Leu Gly Pro His Leu Asn 631

 GTG GTC AAC CTG TTG GGG GCC TGC ACC AAA GGA GGA CCC ATC TAT ATC ATC 2226
 Val Val Asn Leu Leu Gly Ala Cys Thr Lys Gly Gly Pro Ile Tyr Ile Ile 648

 ACT GAG TAC TGC CGC TAC GGA GAC CTG GTG GAC TAC CTG CAC CGC AAC AAA 2277
 Thr Glu Tyr Cys Arg Tyr Gly Asp Leu Val Asp Tyr Leu His Arg Asn Lys 665

 CAC ACC TTC CTG CAG CAC CAC TCC GAC AAG CGC CGC CCG CCC AGC GCG GAG 2328
 His Thr Phe Leu Gln His His Ser Asp Lys Arg Arg Pro Pro Ser Ala Glu 682

 CTC TAC AGC AAT GCT CTG CCC GTT GGG CTC CCC CTG CCC AGC CAT GTG TCC 2379
 Leu Tyr Ser Asn Ala Leu Pro Val Gly Leu Pro Leu Pro Ser His Val Ser 699

 TTG ACC GGG GAG AGC GAC GGT GGC TAC ATG GAC ATG AGC AAG GAC GAG TCG 2430
 Leu Thr Gly Glu Ser Asp Gly Gly Tyr Met Asp Met Ser Lys Asp Glu Ser 716

 GTG GAC TAT GTG CCC ATG CTG GAC ATG AAA GGA GAC GTC AAA TAT GCA GAC 2481
 Val Asp Tyr Val Pro Met Leu Asp Met Lys Gly Asp Val Lys Tyr Ala Asp 733

 ATC GAG TCC TCC AAC TAC ATG GCC CCT TAC GAT AAC TAC GTT CCC TCT GCC 2532
 Ile Glu Ser Ser Asn Tyr Met Ala Pro Tyr Asp Asn Tyr Val Pro Ser Ala 750

 CCT GAG AGG ACC TGC CGA GCA ACT TTG ATC AAC GAG TCT CCA GTG CTA AGC 2583
 Pro Glu Arg Thr Cys Arg Ala Thr Leu Ile Asn Glu Ser Pro Val Leu Ser 767

 TAC ATG GAC CTC GTG GGC TTC AGC TAC CAG GTG GCC AAT GGC ATG GAG TTT 2634
 Tyr Met Asp Leu Val Gly Phe Ser Tyr Gln Val Ala Asn Gly Met Glu Phe 784

 CTG GCC TCC AAG AAC TGC GTC CAC AGA GAC CTG GCG GCT AGG AAC GTG CTC 2685
 Leu Ala Ser Lys Asn Cys Val His Arg Asp Leu Ala Ala Arg Asn Val Leu 801

 ATC TGT GAA GGC AAG CTG GTC AAG ATC TGT GAC TTT GGC CTG GCT CGA GAC 2736
 Ile Cys Glu Gly Lys Leu Val Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp 818

 ATC ATG CGG GAC TCG AAT TAC ATC TCC AAA GGC AGC ACC TTT TTG CCT TTA 2787
 Ile Met Arg Asp Ser Asn Tyr Ile Ser Lys Gly Ser Thr Phe Leu Pro Leu 835

 AAG TGG ATG GCT CCG GAG AGC ATC TTC AAC AGC CTC TAC ACC ACC CTG AGC 2838
 Lys Trp Met Ala Pro Glu Ser Ile Phe Asn Ser Leu Tyr Thr Thr Leu Ser 852

 GAC GTG TGG TCC TTC GGG ATC CTG CTC TGG GAG ATC TTC ACC TTG GGT GGC 2889
 Asp Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly 869

 ACC CCT TAC CCA GAG CTG CCC ATG AAC GAG CAG TTC TAC AAT GCC ATC AAA 2940
 Thr Pro Tyr Pro Glu Leu Pro Met Asn Glu Gln Phe Tyr Asn Ala Ile Lys 886

 CGG GGT TAC CGC ATG GCC CAG CCT GCC CAT GCC TCC GAC GAG ATC TAT GAG 2991
 Arg Gly Tyr Arg Met Ala Gln Pro Ala His Ala Ser Asp Glu Ile Tyr Glu 903

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ATC ATG CAG AAG TGC TGG GAA GAG AAG TTT GAG ATT CGG CCC CCC TTC TCC	3042
Ile Met Gln Lys Cys Trp Glu Glu Lys Phe Glu Ile Arg Pro Pro Phe Ser	920
CAG CTG GTG CTG CTT CTC GAG AGA CTG TTG GGC GAA GGT TAC AAA AAG AAG	3093
Gln Leu Val Leu Leu Leu Glu Arg Leu Leu Gly Glu Gly Tyr Lys Lys Lys	937
TAC CAG CAG GTG GAT GAG GAG TTT CTG AGG AGT GAC CAC CCA GCC ATC CTT	3144
Tyr Gln Gln Val Asp Glu Glu Phe Leu Arg Ser Asp His Pro Ala Ile Leu	954
CGG TCC CAG GCC CGC TTG CCT GGG TTC CAT GGC CTC CGA TCT CCC CTG GAC	3195
Arg Ser Gln Ala Arg Leu Pro Gly Phe His Gly Leu Arg Ser Pro Leu Asp	971
ACC AGC TCC GTC CTC TAT ACT GCC GTG CAG CCC AAT GAG GGT GAC AAC GAC	3246
Thr Ser Ser Val Leu Tyr Thr Ala Val Gln Pro Asn Glu Gly Asp Asn Asp	984
TAT ATC ATC CCC CTG CCT GAC CCC AAA CCT GAG GTT GCT GAC GAG GGC CCA	3297
Tyr Ile Ile Pro Leu Pro Asp Pro Lys Pro Glu Val Ala Asp Glu Gly Pro	1005
CTG GAG GGT TCC CCC AGC CTA GCC AGC TCC ACC CTG AAT GAA GTC AAC ACC	3348
Leu Glu Gly Ser Pro Ser Leu Ala Ser Ser Thr Leu Asn Glu Val Asn Thr	1022
TCC TCA ACC ATC TCC TGT GAC AGC CCC CTG GAG CCC CAG GAC GAA CCA GAG	3399
Ser Ser Thr Ile Ser Cys Asp Ser Pro Leu Glu Pro Gln Asp Glu Pro Glu	1039
CCA GAG CCC CAG CTT GAG CTC CAG GTG GAG CCG GAG CCG GAG CTG GAA CAG	3450
Pro Glu Pro Gln Leu Glu Leu Gln Val Glu Pro Glu Pro Glu Leu Glu Gln	1056
TTG CCG GAT TCG GGG TGC CCT GCG CCT CGG GCG GAA GCA GAG GAT AGC TTC	3501
Leu Pro Asp Ser Gly Cys Pro Ala Pro Arg Ala Glu Ala Glu Asp Ser Phe	1073
CTG TAGGGGGCTGGCCCCCTACCCCTGCCCTGCCTGAAGCTCCCCCGCTGCCAGCACCCAGCATCTCC	3567
Leu	1074
TGGCCTGGCCTGGCCGGGCTTCTGTGTCAGCCAGGCTGCCCTTATCAGCTGTCCCCTTCTGGAAGCTT	3634
TCTGCTCCTGACGTGTTGTGCCCCAAACCCTGGGGCTGGCTTAGGAGGCAAGAAACTGCAGGGGCC	3701
GTGACCAGCCCTCTGCCTCCAGGGAGGCCAACTGACTCTGAGCCAGGGTTCCCCCAGGGAAGTCACT	3768
TTTCCCATATGTAAGATGGGAAAGTTAGGCTTGATGACCCAGAATCTAGGATTCTCTCCCTGGCTGA	3835
CAGGTGGGGAGACCGAATCCCTCCCTGGGAAGATTCTTGAGTTACTGAGGTGGTAAATTAACTTTT	3902
TTCTGTTTCCAGCCAGCTACCCCTCAAGGAATCATAGCTCTCTCCTCGCACTTTTATCCACCCAGGAGC	3969
TAGGGAAGAGACCCTAGCCTCCCTGGCTGCTGGCTGAGCTAGGGCCTAGCCTTGAGCAGTGTGCCT	4036
CATCCAGAAGAAAGCCAGTCTCCTCCCTATGATGCCAGTCCCTGCGTTCCCTGGCCCGAGCTGGTCT	4103
GGGGCCATTAGGCAGCCTAATTAATGCTGGAGGCTGAGCCAAGTACAGGACACCCCCAGCCTGCAGC	4170
CCTTGCCCGAGGCACTTGGAGCACAGCAGCCATAGCAAGTGCCTGTGTCCCTGTCTTCAGGCCCA	4237
TCAGTCTTGGGGCTTTTTTCTTTATCACCCCTCAGTCTTAATCCATCCACCAGAGTCTAGAAGGCCAGA	4304
CGGGCCCCGCATCTGTGATGAGAATGTAAATGTGCCAGTGTGGAGTGGCCACGTGTGTGTGCCAGAT	4371
ATGGCCCTGGCTCTGCATTGGACCTGCTATGAGGCTTTGGAGGAATCCCTCACCCCTCTCTGGGCCCTC	4438

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AGTTTCCCCTTCAAAAAATGAATAAGTCGGACTTATTAACCTCTGAGTGCCTTGCCAGCACTAACATT 4505
CTAGAGTATCCAGGTGGTTGCACATTTGTCCAGATGAAGCAAGGCCATATACCCTAAACTTCCATCC 4572
TGGGGGTCAGCTGGGCTCCTGGGAGATTCCAGATCACACATCACACTCTGGGGACTCAGGAACCATG 4639
CCCCTTCCCCAGGCCCCCAGCAAGTCTCAAGAACACAGCTGCACAGGCCTTGACTTAGAGTGACAGC 4706
CGGTGTCTTGAAAGCCCCCAGCAGCTGCCCCAGGGACATGGGAAGACCACGGGACCTCTTTCTACTA 4773
CCCACGATGACCTCCGGGGGTATCCTGGGCAAAAGGGACAAAGAGGGCAAATGAGATCACCTCCTGC 4840
AGCCCACCACTCCAGCACCTGTGCCGAGGTCTGCGTCGAAGACAGAATGGACAGTGAGGACAGTTAT 4907
GTCTTGTAAAAGACAAGAAGCTTCAGATGGGTACCCCAAGAAGGATGTGAGAGGTGGGCGCTTTGGA 4974
GGTTTGGCCCTCACCCACCAGCTGCCCCATCCCTGAGGCAGCGCTCCATGGGGGTATGGTTTTGTCA 5041
CTGCCCAGACCTAGCAGTGACATCTCATTGTCCCCAGCCAGTGGGCATTGGAGGTGCCAGGGGAGT 5108
CAGGGTTGTAGCCAAGACGCCCCCGCACGGGGAGGGTTGGGAAGGGGGTGCAGGAAGCTCAACCCCT 5175
CTGGGCACCAACCCTGCATTGCAGGTTGGCACCTTACTTCCCTGGGATCCCAGAGTTGGTCCAAGGA 5242
GGGAGAGTGGGTCTCAATACGGTACCAAAGATATAATCACCTAGGTTTACAAATATTTTTAGGACT 5309
CACGTTAACCTACATTTATACAGCAGAAATGCTATTTTGTATGCTGTTAAGTTTTTCTATCTGTGTA 5376
CTTTTTTTTAAGGGAAAGATTTTAATATTAAACCTGGTGCTTCTCACTCAC 5427

Sequence of human PDGF receptor alpha

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TTGGAGCTACAGGGAGAGAAAACAGAGGAGGAGACTGCAAGAGATCATTGGAGGCCGTGGGC	61
ACGCTCTTTACTCCATGTGTGGGACATTCATTGCGGAATAACATCGGAGGAGAAGTTTCCCAGAGCT	128
ATG GGG ACT TCC CAT CCG GCG TTC CTG GTC TTA GGC TGT CTT CTC ACA GGG	179
Met Gly Thr Ser His Pro Ala Phe Leu Val Leu Gly Cys Leu Leu Thr Gly	-7
CTG AGC CTA ATC CTC TGC CAG CTT TCA TTA CCC TCT ATC CTT CCA AAT GAA	230
Leu Ser Leu Ile Leu Cys Gln Leu Ser Leu Pro Ser Ile Leu Pro Asn Glu	11
AAT GAA AAG GTT GTG CAG CTG AAT TCA TCC TTT TCT CTG AGA TGC TTT GGG	281
Asn Glu Lys Val Val Gln Leu Asn Ser Ser Phe Ser Leu Arg Cys Phe Gly	28
GAG AGT GAA GTG AGC TGG CAG TAC CCC ATG TCT GAA GAA GAG AGC TCC GAT	332
Glu Ser Glu Val Ser Trp Gln Tyr Pro Met Ser Glu Glu Glu Ser Ser Asp	45
GTG GAA ATC AGA AAT GAA GAA AAC AAC AGC GGC CTT TTT GTG ACG GTC TTG	383
Val Glu Ile Arg Asn Glu Glu Asn Asn Ser Gly Leu Phe Val Thr Val Leu	62
GAA GTG AGC AGT GCC TCG GCG GCC CAC ACA GGG TTG TAC ACT TGC TAT TAC	434
Glu Val Ser Ser Ala Ser Ala Ala His Thr Gly Leu Tyr Thr Cys Tyr Tyr	79
AAC CAC ACT CAG ACA GAA GAG AAT GAG CTT GAA GGC AGG CAC ATT TAC ATC	485
Asn His Thr Gln Thr Glu Glu Asn Glu Leu Glu Gly Arg His Ile Tyr Ile	96
TAT GTG CCA GAC CCA GAT GTA GCC TTT GTA CCT CTA GGA ATG ACG GAT TAT	536
Tyr Val Pro Asp Pro Asp Val Ala Phe Val Pro Leu Gly Met Thr Asp Tyr	113
TTA GTC ATC GTG GAG GAT GAT GAT TCT GCC ATT ATA CCT TGT CGC ACA ACT	587
Leu Val Ile Val Glu Asp Asp Asp Ser Ala Ile Ile Pro Cys Arg Thr Thr	130
GAT CCC GAG ACT CCT GTA ACC TTA CAC AAC AGT GAG GGG GTG GTA CCT GCC	638
Asp Pro Glu Thr Pro Val Thr Leu His Asn Ser Glu Gly Val Val Pro Ala	147
TCC TAC GAC AGC AGA CAG GGC TTT AAT GGG ACC TTC ACT GTA GGG CCC TAT	689
Ser Tyr Asp Ser Arg Gln Gly Phe Asn Gly Thr Phe Thr Val Gly Pro Tyr	164
ATC TGT GAG GCC ACC GTC AAA GGA AAG AAG TTC CAG ACC ATC CCA TTT AAT	740
Ile Cys Glu Ala Thr Val Lys Gly Lys Lys Phe Gln Thr Ile Pro Phe Asn	181
GTT TAT GCT TTA AAA GCA ACA TCA GAG CTG GAT CTA GAA ATG GAA GCT CTT	791
Val Tyr Ala Leu Lys Ala Thr Ser Glu Leu Asp Leu Glu Met Glu Ala Leu	198
AAA ACC GTG TAT AAG TCA GGG GAA ACG ATT GTG GTC ACC TGT GCT GTT TTT	842
Lys Thr Val Tyr Lys Ser Gly Glu Thr Ile Val Val Thr Cys Ala Val Phe	215
AAC AAT GAG GTG GTT GAC CTT CAA TGG ACT TAC CCT GGA GAA GTG AAA GGC	893
Asn Asn Glu Val Val Asp Leu Gln Trp Thr Tyr Pro Gly Glu Val Lys Gly	232
AAA GGC ATC ACA ATG CTG GAA GAA ATC AAA GTC CCA TCC ATC AAA TTG GTG	944
Lys Gly Ile Thr Met Leu Glu Glu Ile Lys Val Pro Ser Ile Lys Leu Val	249
TAC ACT TTG ACG GTC CCC GAG GCC ACG GTG AAA GAC AGT GGA GAT TAC GAA	995
Tyr Thr Leu Thr Val Pro Glu Ala Thr Val Lys Asp Ser Gly Asp Tyr Glu	266

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TGT	GCT	GCC	CGC	CAG	GCT	ACC	AGG	GAG	GTC	AAA	GAA	ATG	AAG	AAA	GTC	ACT	1046
Cys	Ala	Ala	Arg	Gln	Ala	Thr	Arg	Glu	Val	Lys	Glu	Met	Lys	Lys	Val	Thr	283
ATT	TCT	GTC	CAT	GAG	AAA	GGT	TTC	ATT	GAA	ATC	AAA	CCC	ACC	TTC	AGC	CAG	1097
Ile	Ser	Val	His	Glu	Lys	Gly	Phe	Ile	Glu	Ile	Lys	Pro	Thr	Phe	Ser	Gln	300
TTG	GAA	GCT	GTC	AAC	CTG	CAT	GAA	GTC	AAA	CAT	TTT	GTT	GTA	GAG	GTG	CGG	1148
Leu	Glu	Ala	Val	Asn	Leu	His	Glu	Val	Lys	His	Phe	Val	Val	Glu	Val	Arg	317
GCC	TAC	CCA	CCT	CCC	AGG	ATA	TCC	TGG	CTG	AAA	AAC	AAT	CTG	ACT	CTG	ATT	1199
Ala	Tyr	Pro	Pro	Pro	Arg	Ile	Ser	Trp	Leu	Lys	Asn	Asn	Leu	Thr	Leu	Ile	334
GAA	AAT	CTC	ACT	GAG	ATC	ACC	ACT	GAT	GTG	GAA	AAG	ATT	CAG	GAA	ATA	AGG	1250
Glu	Asn	Leu	Thr	Glu	Ile	Thr	Thr	Asp	Val	Glu	Lys	Ile	Gln	Glu	Ile	Arg	351
TAT	CGA	AGC	AAA	TTA	AAG	CTG	ATC	CGT	GCT	AAG	GAA	GAA	GAC	AGT	GGC	CAT	1301
Tyr	Arg	Ser	Lys	Leu	Lys	Leu	Ile	Arg	Ala	Lys	Glu	Glu	Asp	Ser	Gly	His	368
TAT	ACT	ATT	GTA	GCT	CAA	AAT	GAA	GAT	GCT	GTG	AAG	AGC	TAT	ACT	TTT	GAA	1352
Tyr	Thr	Ile	Val	Ala	Gln	Asn	Glu	Asp	Ala	Val	Lys	Ser	Tyr	Thr	Phe	Glu	385
CTG	TTA	ACT	CAA	GTT	CCT	TCA	TCC	ATT	CTG	GAC	TTG	GTC	GAT	GAT	CAC	CAT	1403
Leu	Leu	Thr	Gln	Val	Pro	Ser	Ser	Ile	Leu	Asp	Leu	Val	Asp	Asp	His	His	402
GGC	TCA	ACT	GGG	GGA	CAG	ACG	GTG	AGG	TGC	ACA	GCT	GAA	GGC	ACG	CCG	CTT	1454
Gly	Ser	Thr	Gly	Gly	Gln	Thr	Val	Arg	Cys	Thr	Ala	Glu	Gly	Thr	Pro	Leu	419
CCT	GAT	ATT	GAG	TGG	ATG	ATA	TGC	AAA	GAT	ATT	AAG	AAA	TGT	AAT	AAT	GAA	1505
Pro	Asp	Ile	Glu	Trp	Met	Ile	Cys	Lys	Asp	Ile	Lys	Lys	Cys	Asn	Asn	Glu	436
ACT	TCC	TGG	ACT	ATT	TTG	GCC	AAC	AAT	GTC	TCA	AAC	ATC	ATC	ACG	GAG	ATC	1556
Thr	Ser	Trp	Thr	Ile	Leu	Ala	Asn	Asn	Val	Ser	Asn	Ile	Ile	Thr	Glu	Ile	453
CAC	TCC	CGA	GAC	AGG	AGT	ACC	GTG	GAG	GGC	CGT	GTG	ACT	TTC	GCC	AAA	GTG	1607
His	Ser	Arg	Asp	Arg	Ser	Thr	Val	Glu	Gly	Arg	Val	Thr	Phe	Ala	Lys	Val	470
GAG	GAG	ACC	ATC	GCC	GTG	CGA	TGC	CTG	GCT	AAG	AAT	CTC	CTT	GGA	GCT	GAG	1658
Glu	Glu	Thr	Ile	Ala	Val	Arg	Cys	Leu	Ala	Lys	Asn	Leu	Leu	Gly	Ala	Glu	487
AAC	CGA	GAG	CTG	AAG	CTG	GTG	GCT	CCC	ACC	CTG	CGT	TCT	GAA	CTC	ACG	GTG	1709
Asn	Arg	Glu	Leu	Lys	Leu	Val	Ala	Pro	Thr	Leu	Arg	Ser	Glu	Leu	Thr	Val	504
GCT	GCT	GCA	GTC	CTG	GTG	CTG	TTG	GTG	ATT	GTG	ATC	ATC	TCA	CTT	ATT	GTC	1760
Ala	Ala	Ala	Val	Leu	Val	Leu	Leu	Val	Ile	Val	Ile	Ile	Ser	Leu	Ile	Val	521
CTG	GTT	GTC	ATT	TGG	AAA	CAG	AAA	CCG	AGG	TAT	GAA	ATT	CGC	TGG	AGG	GTC	1811
Leu	Val	Val	Ile	Trp	Lys	Gln	Lys	Pro	Arg	Tyr	Glu	Ile	Arg	Trp	Arg	Val	538
ATT	GAA	TCA	ATC	AGC	CCA	GAT	GGA	CAT	GAA	TAT	ATT	TAT	GTG	GAC	CCG	ATG	1862
Ile	Glu	Ser	Ile	Ser	Pro	Asp	Gly	His	Glu	Tyr	Ile	Tyr	Val	Asp	Pro	Met	555
CAG	CTG	CCT	TAT	GAC	TCA	AGA	TGG	GAG	TTT	CCA	AGA	GAT	GGA	CTA	GTG	CTT	1913
Gln	Leu	Pro	Tyr	Asp	Ser	Arg	Trp	Glu	Phe	Pro	Arg	Asp	Gly	Leu	Val	Leu	572
GGT	CGG	GTC	TTG	GGG	TCT	GGA	GCG	TTT	GGG	AAG	GTG	GTT	GAA	GGA	ACA	GCC	1964
Gly	Arg	Val	Leu	Gly	Ser	Gly	Ala	Phe	Gly	Lys	Val	Val	Glu	Gly	Thr	Ala	589

TAT GGA TTA AGC CGG TCC CAA CCT GTC ATG AAA GTT GCA GTG AAG ATG CTA 2015
Tyr Gly Leu Ser Arg Ser Gln Pro Val Met Lys Val Ala Val Lys Met Leu 506

AAA CCC ACG GCC AGA TCC AGT GAA AAA CAA GCT CTC ATG TCT GAA CTG AAG 2066
Lys Pro Thr Ala Arg Ser Ser Glu Lys Gln Ala Leu Met Ser Glu Leu Lys 623

ATA ATG ACT CAC CTG GGG CCA CAT TTG AAC ATT GTA AAC TTG CTG GGA GCC 2117
Ile Met Thr His Leu Gly Pro His Leu Asn Ile Val Asn Leu Leu Gly Ala 640

TGC ACC AAG TCA GGC CCC ATT TAC ATC ATC ACA GAG TAT TGC TTC TAT GGA 2168
Cys Thr Lys Ser Gly Pro Ile Tyr Ile Ile Thr Glu Tyr Cys Phe Tyr Gly 657

GAT TTG GTC AAC TAT TTG CAT AAG AAT AGG GAT AGC TTC CTG AGC CAC CAC 2219
Asp Leu Val Asn Tyr Leu His Lys Asn Arg Asp Ser Phe Leu Ser His His 674

CCA GAG AAG CCA AAG AAA GAG CTG GAT ATC TTT GGA TTG AAC CCT GCT GAT 2270
Pro Glu Lys Pro Lys Lys Glu Leu Asp Ile Phe Gly Leu Asn Pro Ala Asp 691

GAA AGC ACA CGG AGC TAT GTT ATT TTA TCT TTT GAA AAC AAT GGT GAC TAC 2321
Glu Ser Thr Arg Ser Tyr Val Ile Leu Ser Phe Glu Asn Asn Gly Asp Tyr 708

ATG GAC ATG AAG CAG GCT GAT ACT ACA CAG TAT GTC CCC ATG CTA GAA AGG 2372
Met Asp Met Lys Gln Ala Asp Thr Thr Gln Tyr Val Pro Met Leu Glu Arg 725

AAA GAG GTT TCT AAA TAT TCC GAC ATC CAG AGA TCA CTC TAT GAT CGT CCA 2423
Lys Glu Val Ser Lys Tyr Ser Asp Ile Gln Arg Ser Leu Tyr Asp Arg Pro 742

GCC TCA TAT AAG AAG AAA TCT ATG TTA GAC TCA GAA GTC AAA AAC CTC CTT 2474
Ala Ser Tyr Lys Lys Lys Ser Met Leu Asp Ser Glu Val Lys Asn Leu Leu 759

TCA GAT GAT AAC TCA GAA GGC CTT ACT TTA TTG GAT TTG TTG AGC TTC ACC 2525
Ser Asp Asp Asn Ser Glu Gly Leu Thr Leu Leu Asp Leu Leu Ser Phe Thr 776

TAT CAA GTT GCC CGA GGA ATG GAG TTT TTG GCT TCA AAA AAT TGT GTC CAC 2576
Tyr Gln Val Ala Arg Gly Met Glu Phe Leu Ala Ser Lys Asn Cys Val His 793

CGT GAT CTG GCT GCT CGC AAC GTT CTC CTG GCA CAA GGA AAA ATT GTG AAG 2627
Arg Asp Leu Ala Ala Arg Asn Val Leu Leu Ala Gln Gly Lys Ile Val Lys 810

ATC TGT GAC TTT GGC CTG GCC AGA GAC ATC ATG CAT GAT TCG AAC TAT GTG 2678
Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Met His Asp Ser Asn Tyr Val 827

TCG AAA GGC AGT ACC TTT CTG CCC GTG AAG TGG ATG GCT CCT GAG AGC ATC 2729
Ser Lys Gly Ser Thr Phe Leu Pro Val Lys Trp Met Ala Pro Glu Ser Ile 844

TTT GAC AAC CTC TAC ACC ACA CTG AGT GAT GTC TGG TCT TAT GGC ATT CTG 2780
Phe Asp Asn Leu Tyr Thr Thr Leu Ser Asp Val Trp Ser Tyr Gly Ile Leu 861

CTC TGG GAG ATC TTT TCC CTT GGT GGC ACC CCT TAC CCC GGC ATG ATG GTG 2831
Leu Trp Glu Ile Phe Ser Leu Gly Gly Thr Pro Tyr Pro Gly Met Met Val 878

GAT TCT ACT TTC TAC AAT AAG ATC AAG AGT GGG TAC CGG ATG GCC AAG CCT 2882
Asp Ser Thr Phe Tyr Asn Lys Ile Lys Ser Gly Tyr Arg Met Ala Lys Pro 895

GAC CAC GCT ACC AGT GAA GTC TAC GAG ATC ATG GTG AAA TGC TGG AAC AGT 2933
Asp His Ala Thr Ser Glu Val Tyr Glu Ile Met Val Lys Cys Trp Asn Ser 912

GAG CCG GAG AAG AGA CCC TCC TTT TAC CAC CTG AGT GAG ATT GTG GAG AAT 2984
Glu Pro Glu Lys Arg Pro Ser Phe Tyr His Leu Ser Glu Ile Val Glu Asn 929

CTG CTG CCT GGA CAA TAT AAA AAG AGT TAT GAA AAA ATT CAC CTG GAC TTC 3035
Leu Leu Pro Gly Gln Tyr Lys Lys Ser Tyr Glu Lys Ile His Leu Asp Phe 946

CTG AAG AGT GAC CAT CCT GCT GTG GCA CGC ATG CGT GTG GAC TCA GAC AAT 3086
Leu Lys Ser Asp His Pro Ala Val Ala Arg Met Arg Val Asp Ser Asp Asn 963

GCA TAC ATT GGT GTC ACC TAC AAA AAC GAG GAA GAC AAG CTG AAG GAC TGG 3137
Ala Tyr Ile Gly Val Thr Tyr Lys Asn Glu Glu Asp Lys Leu Lys Asp Trp 980

GAG GGT GGT CTG GAT GAG CAG AGA CTG AGC GCT GAC AGT GGC TAC ATC ATT 3188
Glu Gly Gly Leu Asp Glu Gln Arg Leu Ser Ala Asp Ser Gly Tyr Ile Ile 997

CCT CTG CCT GAC ATT GAC CCT GTC CCT GAG GAG GAG GAC CTG GGC AAG AGG 3239
Pro Leu Pro Asp Ile Asp Pro Val Pro Glu Glu Glu Asp Leu Gly Lys Arg 1014

AAC AGA CAC AGC TCG CAG ACC TCT GAA GAG AGT GCC ATT GAG ACG GGT TCC 3290
Asn Arg His Ser Ser Gln Thr Ser Glu Glu Ser Ala Ile Glu Thr Gly Ser 1031

AGC AGT TCC ACC TTC ATC AAG AGA GAG GAC GAG ACC ATT GAA GAC ATC GAC 3341
Ser Ser Ser Thr Phe Ile Lys Arg Glu Asp Glu Thr Ile Glu Asp Ile Asp 1048

ATG ATG GAC GAC ATC GGC ATA GAC TCT TCA GAC CTG GTG GAA GAC AGC TTC 3392
Met Met Asp Asp Ile Gly Ile Asp Ser Ser Asp Leu Val Glu Asp Ser Phe 1065

CTG TAACTGGCGGATTCGAGGGGTTCCCTTCCACTTCTGGGGCCACCTCTGGATCCCGTTCAGAAAA 3458
Leu 1066

CCACTTTATTGCAATGCGGAGGTTGAGAGGAGGACTTGGTTGATGTTTAAAGAGAAGTTCCCAGCCA 3525

AGGGCCTCGGGGAGCCTTTCTAAATATGAATGAATGGGATATTTTGAAATGAACTTTGTCACTGTTG 3592

CCTCTTGCAATGCCTCAGTAGCATCTCAGTGGTGTGTGAAGTTTGGAGATAGATGGATAAGGGAATA 3659

ATAGGCCACAGAAGGTGAACTTTCTGCTTCAAGGACATTGGTGAGAGTCCAACAGACACAATTTATA 3726

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